

ABSTRACT OF THE DISCLOSURE

A system and method are provided for thread-safe initialization of static variables in a multitasking system.. In one embodiment, the static fields of a class may be
5 “virtualized” such that each application that utilizes the class has its own copy of static fields. Each separate copy of the static fields is initialized only once. Instructions for performing the initialization may be embedded in a class constructor. The class constructor may be executed only once for each separate copy of the static fields. A template class may be loaded for each separate copy of the static fields when a copy of
10 the static fields is sought to be initialized. The template class may include a static initializer for one of the separate copies of the static fields. The template class may be renamed with a unique name for each separate copy of the static fields. The renaming may guarantee that the system class loader sees a new class name and therefore loads the class. The static initializer may be executed once for each separate copy of the static
15 fields. By attaching static field initialization to class initialization, the initialization may be made safe, and the virtualization transformations may preserve the semantics of the original program code.

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